

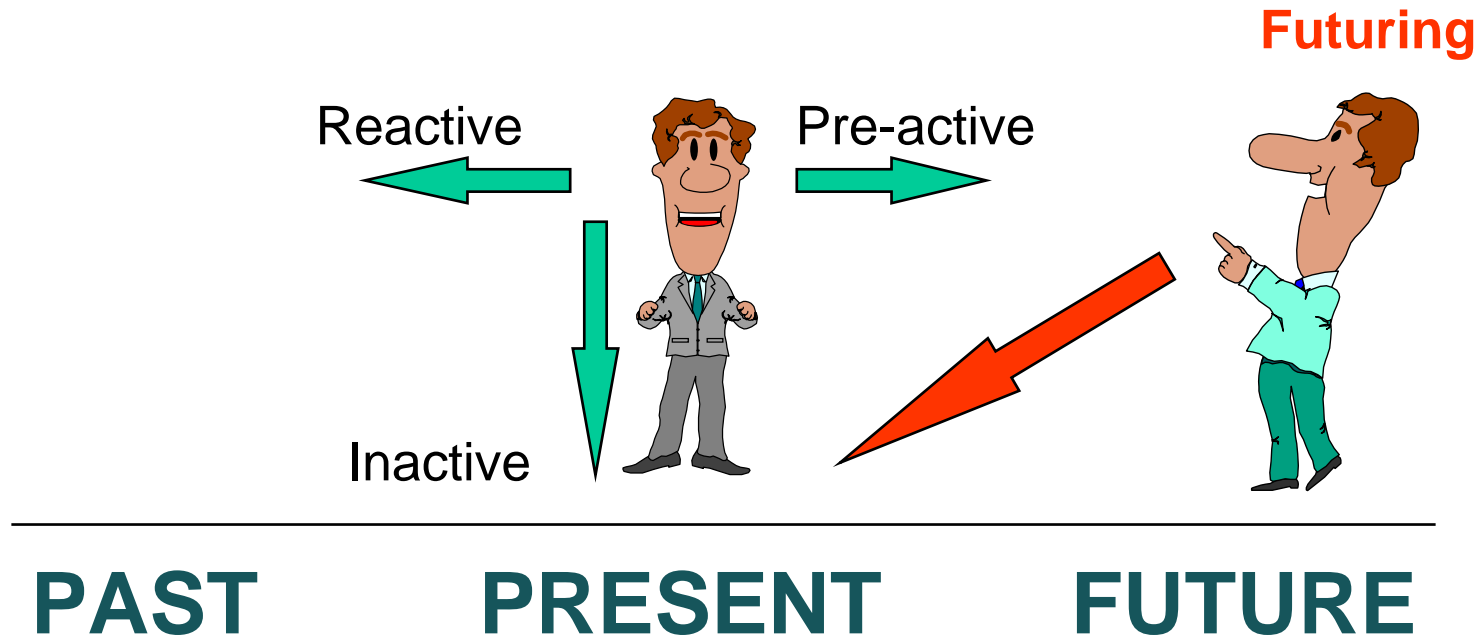


***Lessons from the Future:
Planning for a Fast Forward World***

Glen Hiemstra

Futurist.com

PERSPECTIVES FOR PLANNING



The Basic Lessons from the Future

The future is “**creatable**”-- so you have choice.

There is a **knowable** future -- so you need to look.

The future is **unpredictable** -- so you need values.

The future **creates the present** -- so you need vision.



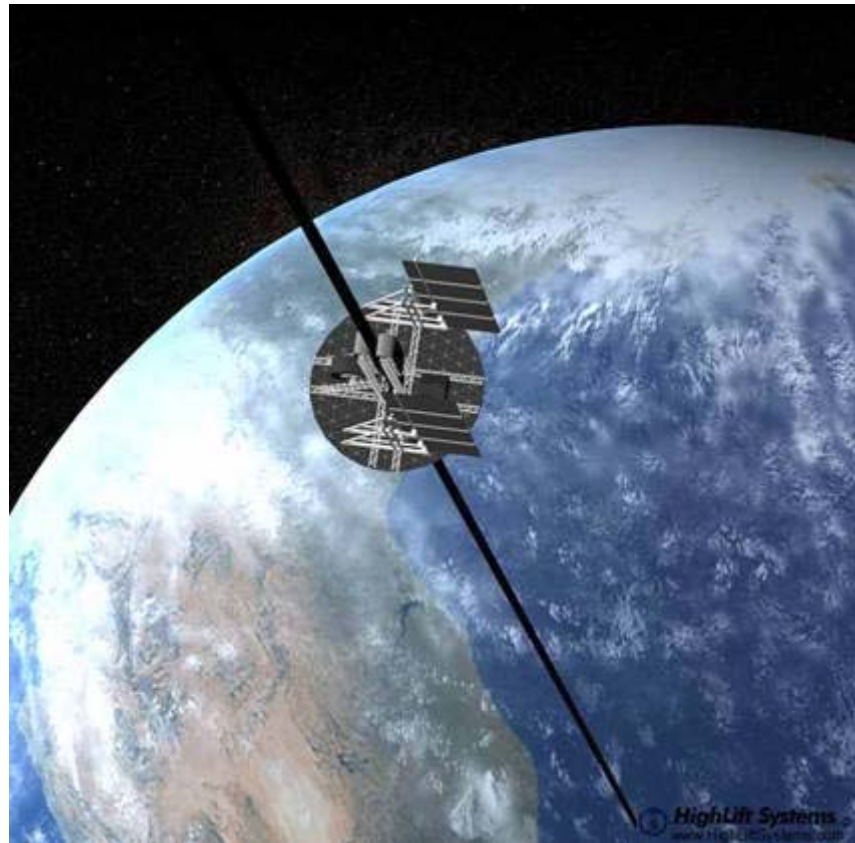
Lesson 1:
The future
creates the
present....
so you need
vision.

What is Your Image of the Future?

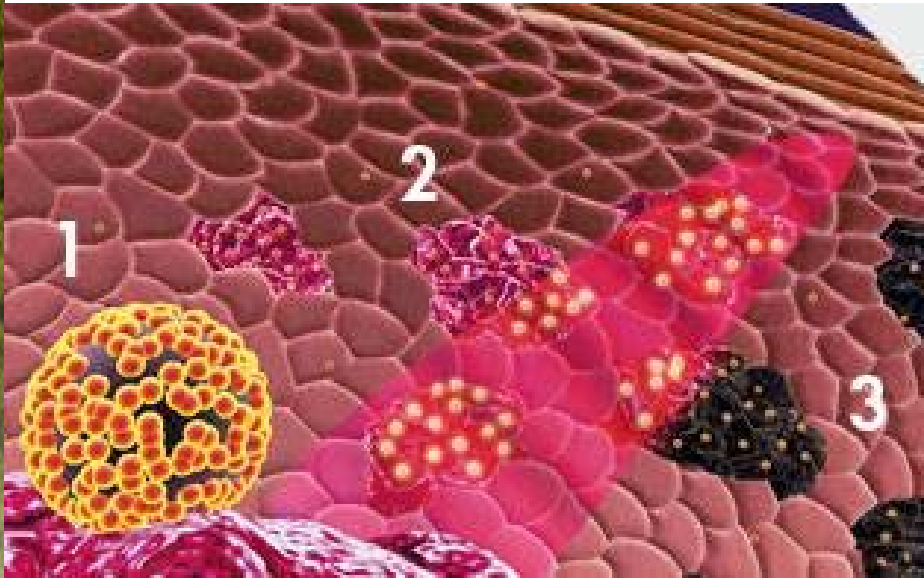


Lesson 2: Great technology revolutions yet to come

Big
Nanotechnology



Molecular Manufacturing



Peak Oil Tipping Point...and the car that will change everything



“In the next 20 years PC’s will be replaced by millions of tiny intelligent systems embedded in our clothes, jewelry, cars, furniture, and walls. They will recognize voice commands and carry out simple wishes. They will cost less than a penny, less than scrap paper, so companies which do not put chips [intelligence] in all their products will be at a severe disadvantage.”

- Michio Kaku

WI-MAX

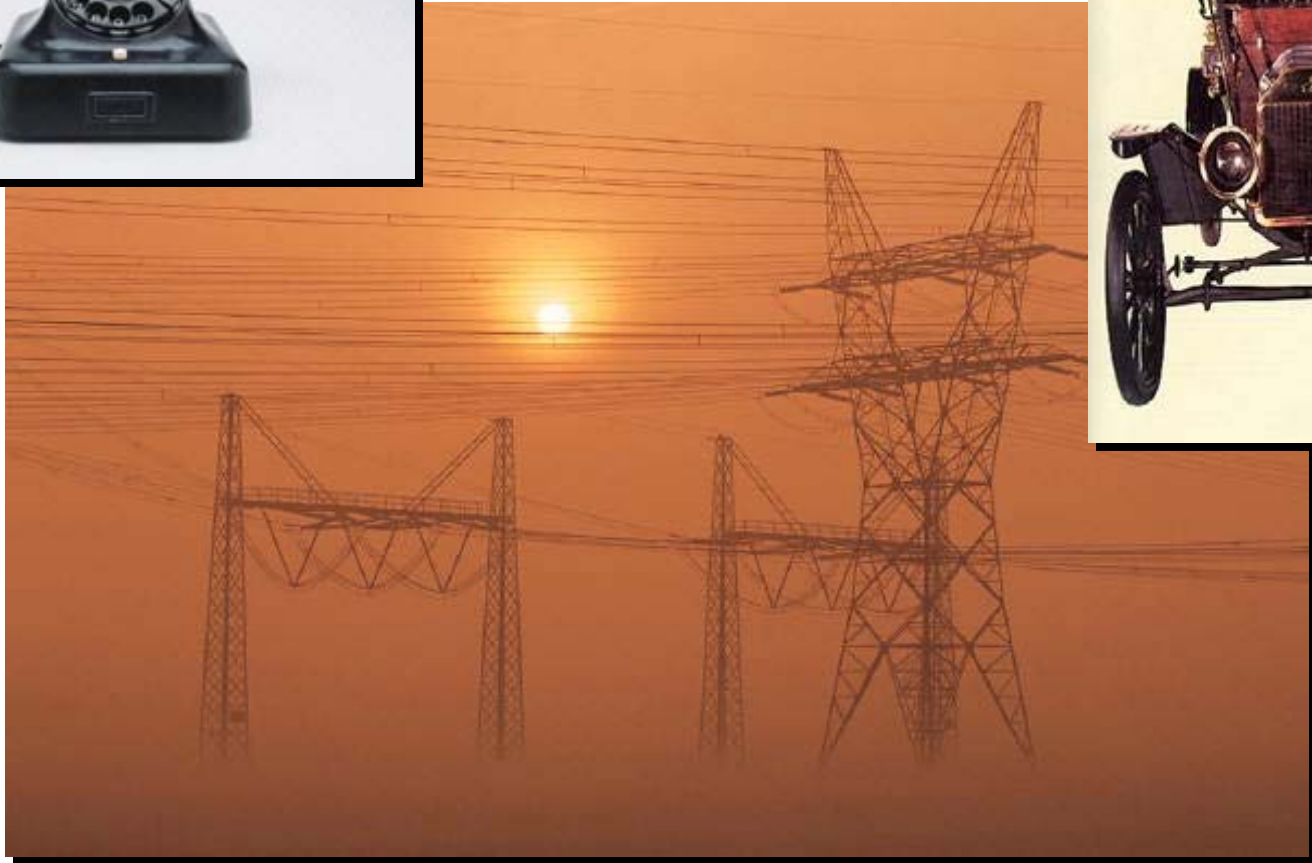
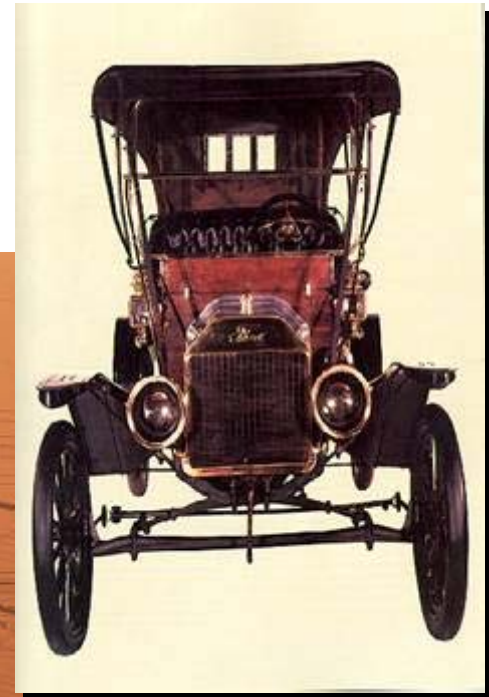
RFID

**Location-based
Service**

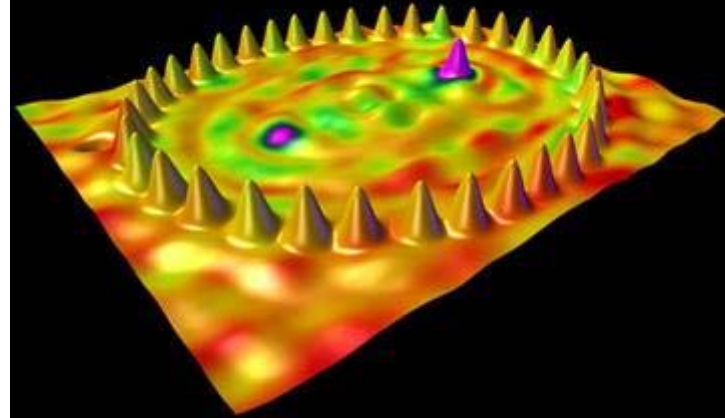
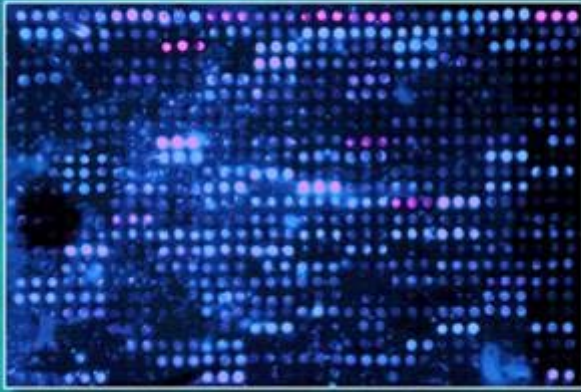
3-D Communications – The Next Stage



SIGGRAPH
2002



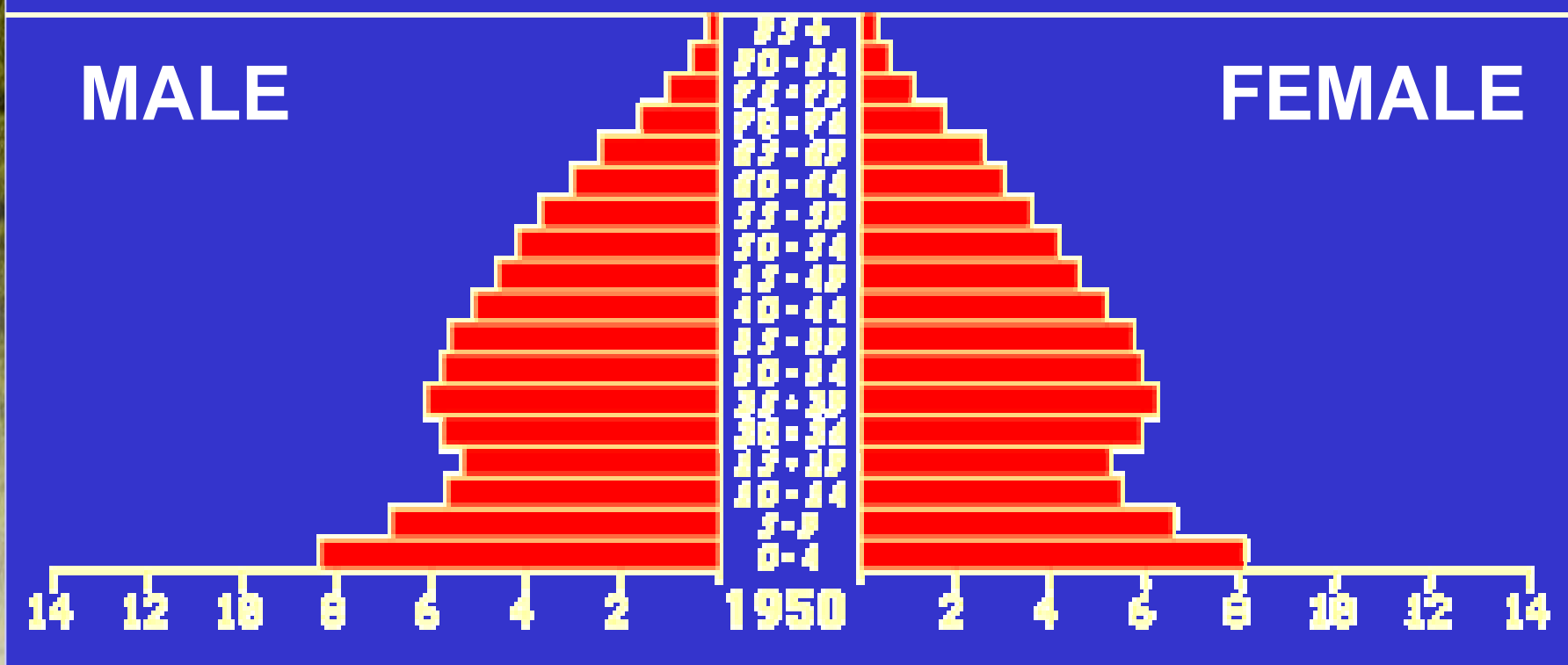
Gene Chips Reveal Susceptibilities



Lesson 3: The people you see in 2030 will look different.



Age Wave In Action



Millions of People

2205 Days until the first Boomer turns 65

- ◆ Communicating
- ◆ Sharing
- ◆ Buying & Selling
- ◆ Exchanging
- ◆ Creating
- ◆ Meeting
- ◆ Dating
- ◆ Collecting
- ◆ Coordinating
- ◆ Evaluating
- ◆ Gaming
- ◆ Learning
- ◆ Searching
- ◆ Analyzing
- ◆ Growing up
- ◆ Evolving

Digital Natives & Digital Immigrants

Marc Prensky originated "digital native" term and this list

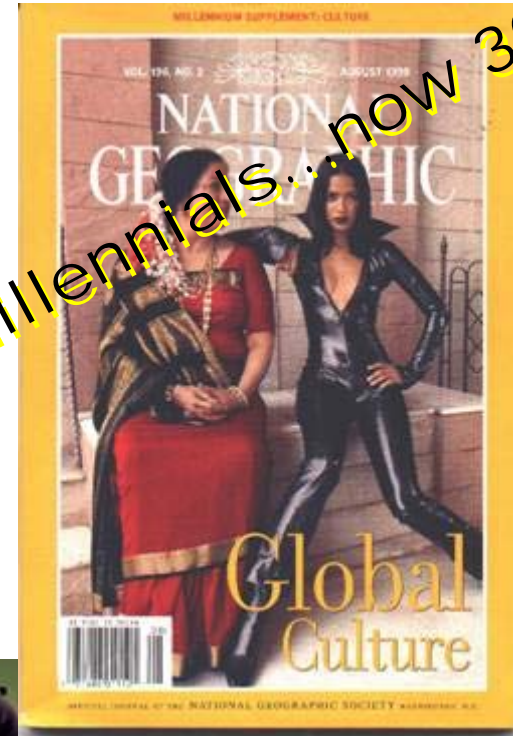
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Generations in 2030



Boomers...now 66-84



Millennials...now 30-50



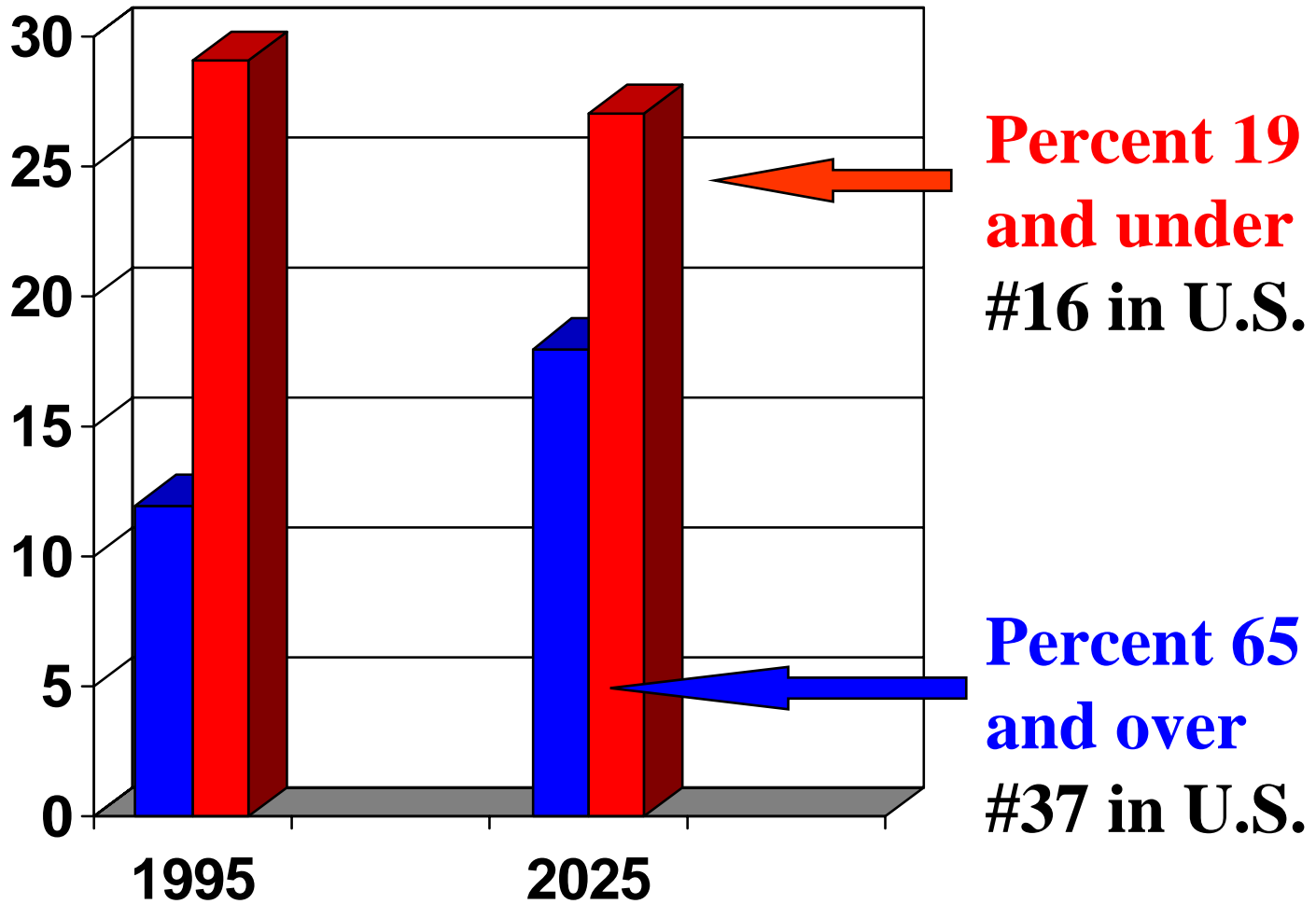
Traditionals...
now 85+



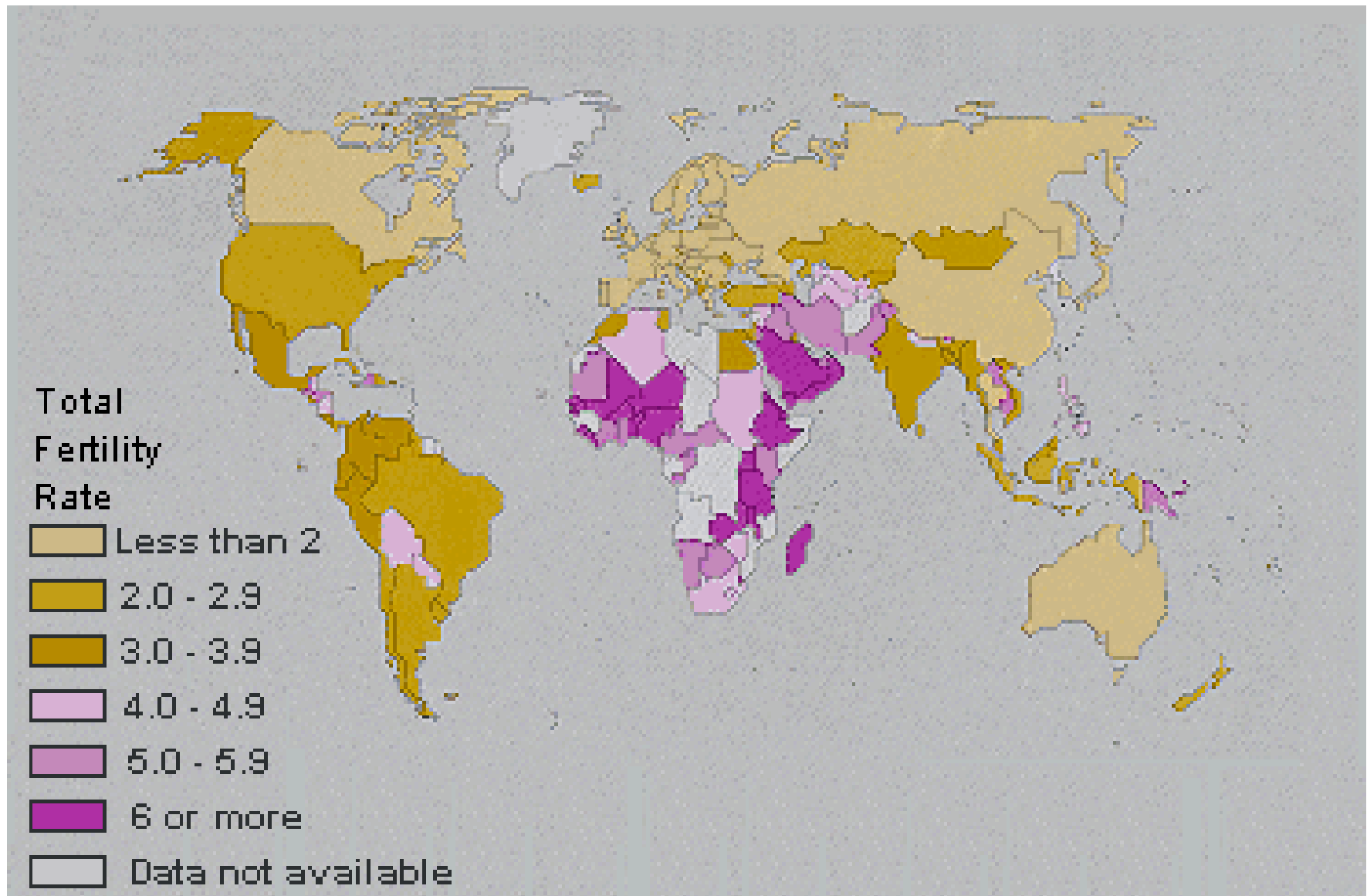
Generation X
...now 50-65

GenZ...now 10-30
GenZZ...now 0-10

Michigan State Population



World Fertility Patterns 1997



Russia urges procreation to offset slip in population

Germany sees population decline

REUTERS AND
THE ASSOCIATED PRESS

BERLIN — Germany will need to raise the birth rate and import millions of workers to maintain its population, a government report said Tuesday.

the seriousness of the situation. In 1950 there were twice as many people under 20 as over 60. That

Japanese urged to have kids

♦ **THE GOVERNMENT** worries that the country's low birthrate spells big trouble for the future.

BY HANS GREIMEL
The Associated Press

TOKYO — He enjoys his freedom, staying out late and drinking with friends. She's a company woman, bent on building a career before a family. Both are too busy to even think about marriage, let alone kids. And that's becoming a big problem, the Japanese government says.

Alarmed by the portrait statistics paint of an increasing proportion of Japan's twenty- and thirty-somethings, the government released a report yesterday recommending a "structural reform in lifestyle" — and urging young Japanese to work less and have more babies.

Otherwise, the government said, Japan risks a demographic disaster that threatens to undercut its already sagging economy.

The nation's plunging birthrate is the root of the trouble. As the work force continues to shrink, covering the health and retirement costs of the graying population is one of the government's biggest challenges.

Yesterday's "Lifestyle White Paper," commissioned by Prime Minister Junichiro Koizumi's of-

fice, explored ways of boosting the birthrate by making married life with children more attractive to a younger generation.

Among the report's findings was that about 52 percent of the country's young women and 40 percent of its young men shunned marriage and child-rearing as a source of fulfillment.

It proposed tackling such attitudes by restructuring lifestyles, a nod to the structural overhaul Koizumi also is proposing to rescue Japan's economy.

Among the report's recommendations were implementing policies that reduce working hours, increase free time for the family and improve access to child care.

The high cost of raising and educating children, job demands and climbing divorce rates are just some of the reasons young people see matrimony as "limiting their freedom" and children as "a burden," the study concluded.

While many derive satisfaction from work, the report said others hold down jobs simply to make

ends meet as Japan slogs through its third recession in a decade.

According to the report, the percentage of full-time housewives fell to 26 percent in 2000, from 37 percent in 1980 during Japan's economic boom, as more women took jobs for extra income.

The report also urged companies to come up with effective ways to let male employees help in child rearing and said mobile phones and the Internet could be used more effectively to reinforce family ties.

Japan's sagging birthrate, only 1.35 births per woman, is a major worry to Japanese leaders. Demographers expect the population to peak as early as 2005, raising doubts about the ability of future generations to support the swelling ranks of elderly.

About 17.7 percent of Japanese are 65 or older, compared with 12.6 percent in the United States, a factor driving health insurance and pension plans to the brink of failure.

Sagging birth rate spurs Japan to offer breaks to its working parents

REUTERS

TOKYO — Worried about a falling birth rate and a rapidly aging society, Japan's Labor Ministry has drafted steps to help parents juggle child-rearing and jobs.

The measures — aimed at cutting parents' long overtime hours, reducing their work week and promoting equal job opportunities for men and women — are in a five-year plan starting this year, Kyodo news agency said.

The move comes as politicians, economic planners and experts fret about how to fund the bulging cost of supporting the elderly and to fill the labor gap left by a shrinking working-age population. The ratio of those aged 65 or older already has hit 16.7 percent, a government paper said earlier this week.

record low birth rates continue, the government said Tuesday.

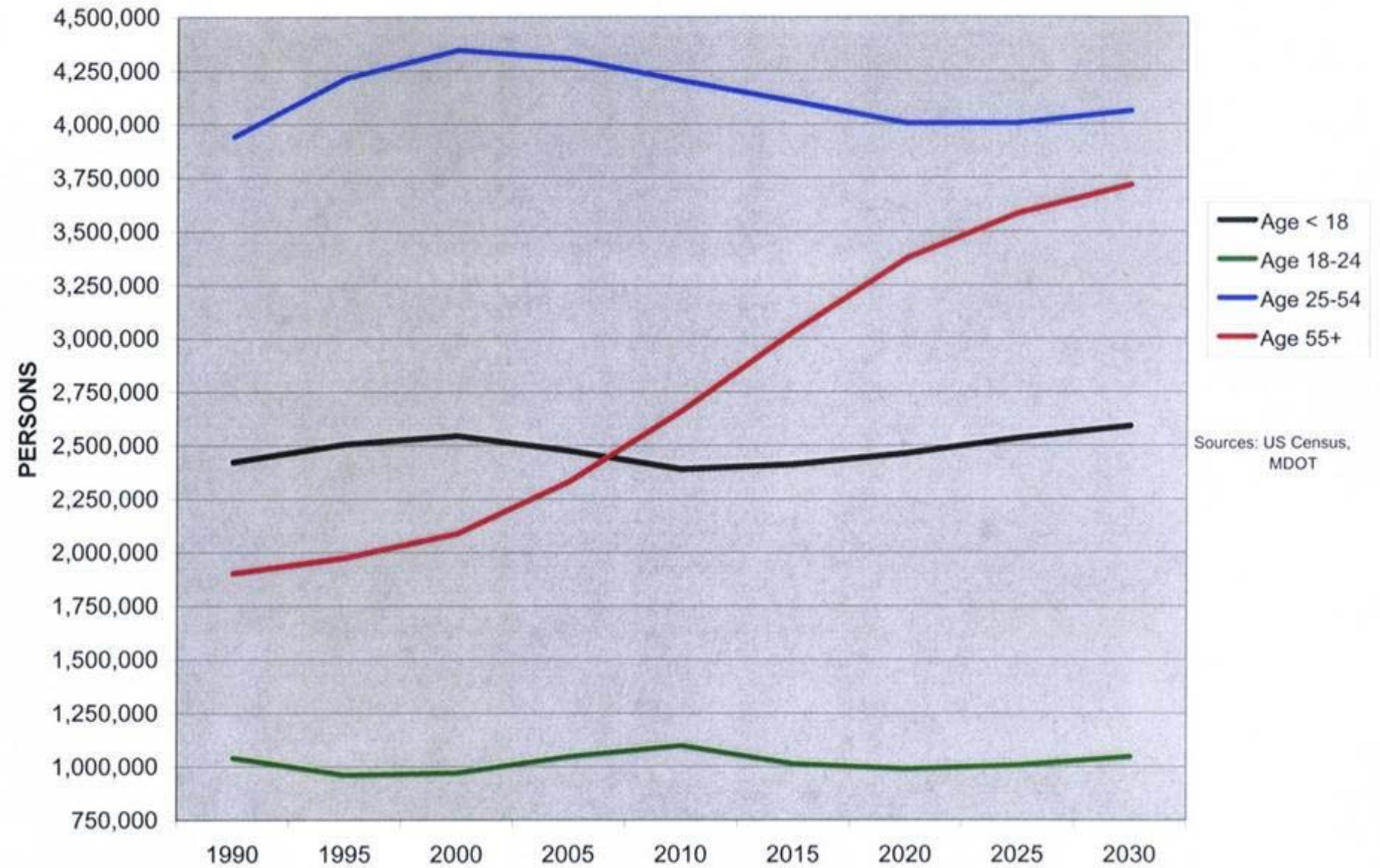
The rapid trend toward a higher percentage of older people has long been a major concern for Japan. More people in their retirement years and fewer people paying taxes could drain the nation's treasury, officials fear.

As of Oct. 1, 1999, according to an annual report released Tuesday, Japanese aged 65 or older totaled 21.2 million, 16.7 percent of the population.

By 2005, that percentage will hit 19.6, the highest in the world. Japan currently ranks second after Sweden, which had a 65-or-older percentage of 17.6 five years ago. In 15 years, the report said, one in four Japanese will be 65 or older.

"In the early 21st century, the

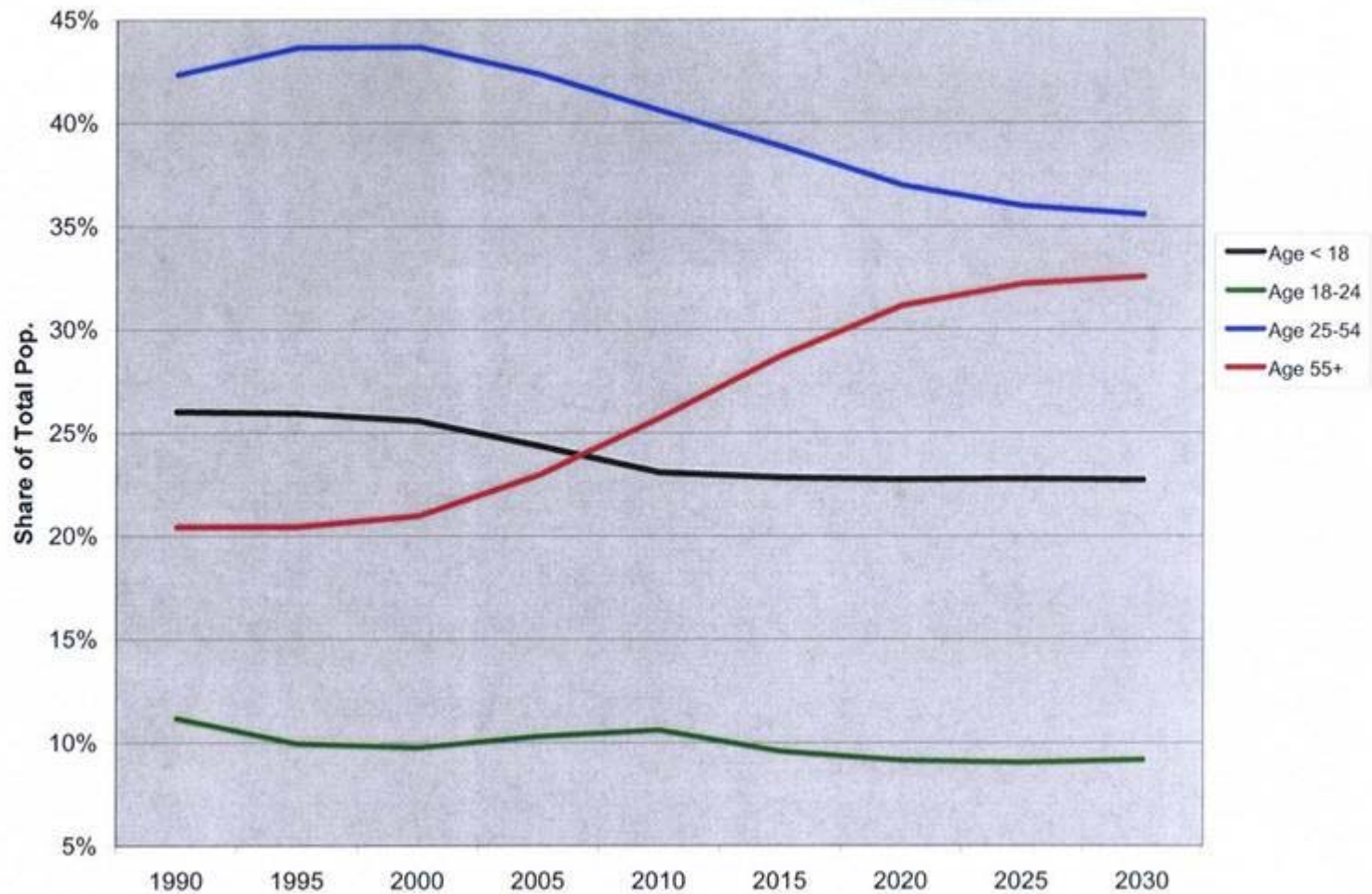
Statewide Population 1990-2030

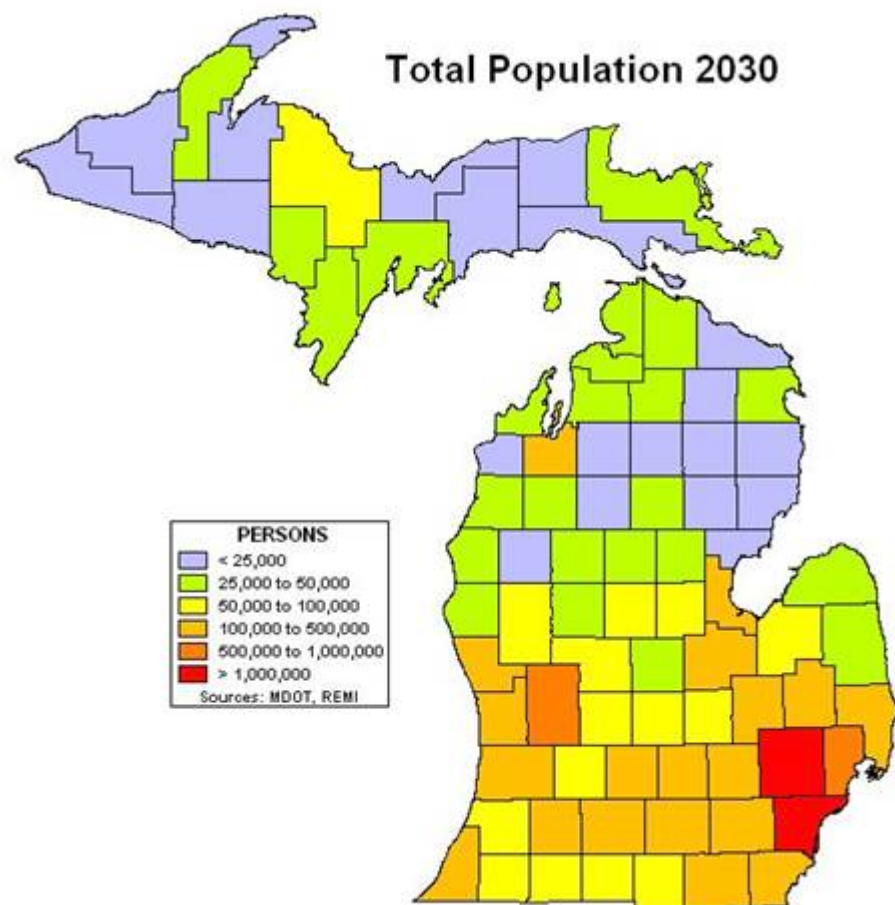
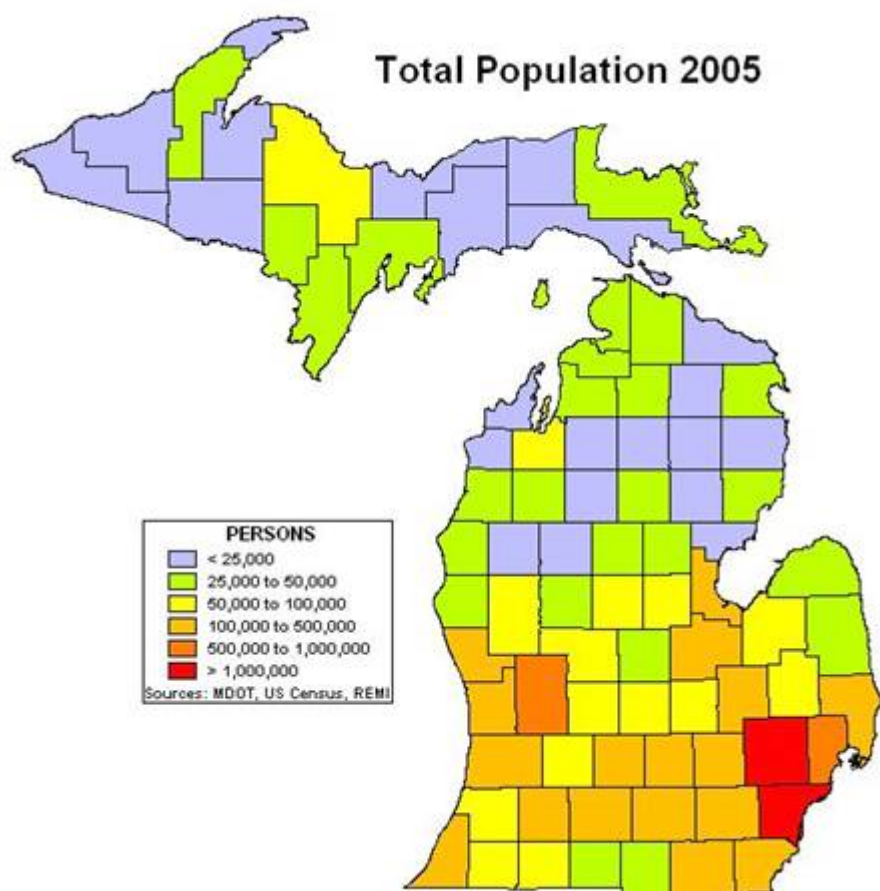


10,000,000

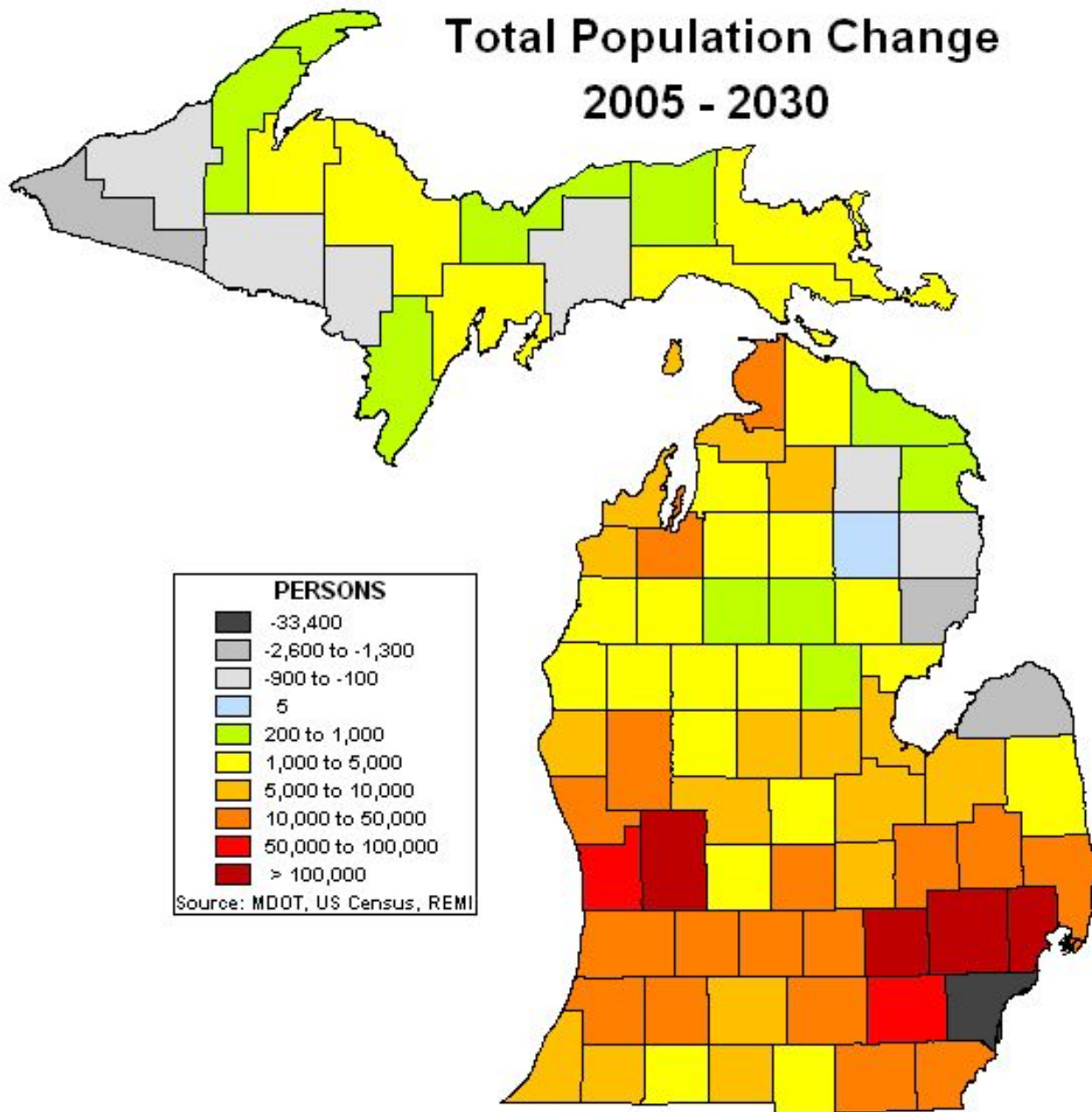
11,450,000

Statewide Population 1990-2030





Total Population Change 2005 - 2030

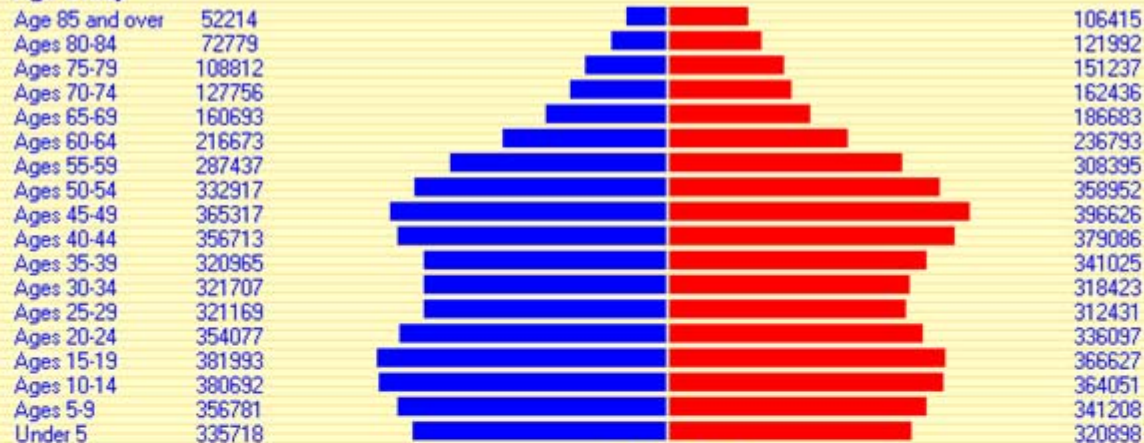


Michigan County Population Projections by Age Group, Sex, and Race and Hispanic

Origin: 2005

Place: Michigan

Age Group



Male Female

Age Dependency Ratios:

	Ages 0-14	Ages 15-64	Ages 65+	Depend. Ratio
Male	1073191	3258968	522254	48.96
Female	1026157	3354455	728763	52.32
Total	2099348	6613423	1251017	50.66

Note:

Age dependency ratios indicate the variations in the proportions of children, aged persons, and persons of 'working age.' Usually, the age dependency ratio is calculated as the ratio of the combined child population and aged population to the population intermediate age.

previous

MSU

PADE

VIIPP

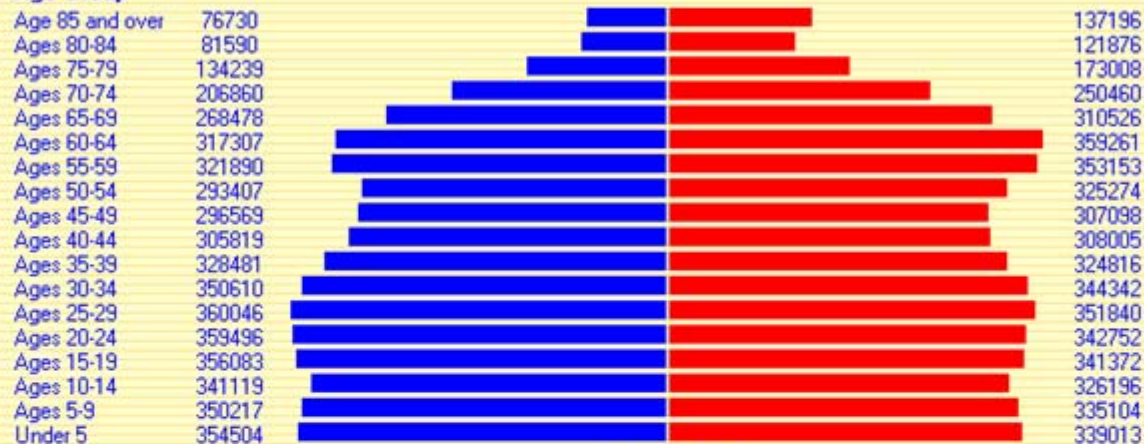
ICYF

Michigan County Population Projections by Age Group, Sex, and Race and Hispanic

Origin: 2020

Place: Michigan

Age Group



Male Female

Age Dependency Ratios:

	Ages 0-14	Ages 15-64	Ages 65+	Depend. Ratio
Male	1045840	3289708	767897	55.13
Female	1000313	3357913	993066	59.36
Total	2046153	6647621	1760963	57.27

Note:

Age dependency ratios indicate the variations in the proportions of children, aged persons, and persons of 'working age.' Usually, the age dependency ratio is calculated as the ratio of the combined child population and aged population to the population intermediate age.

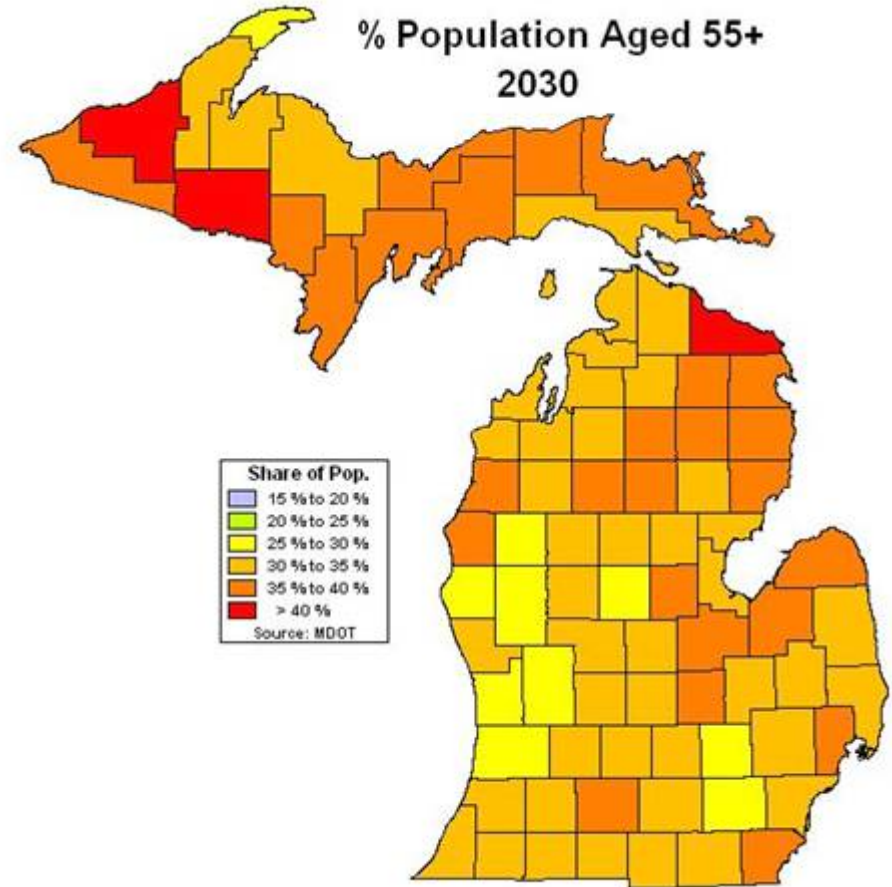
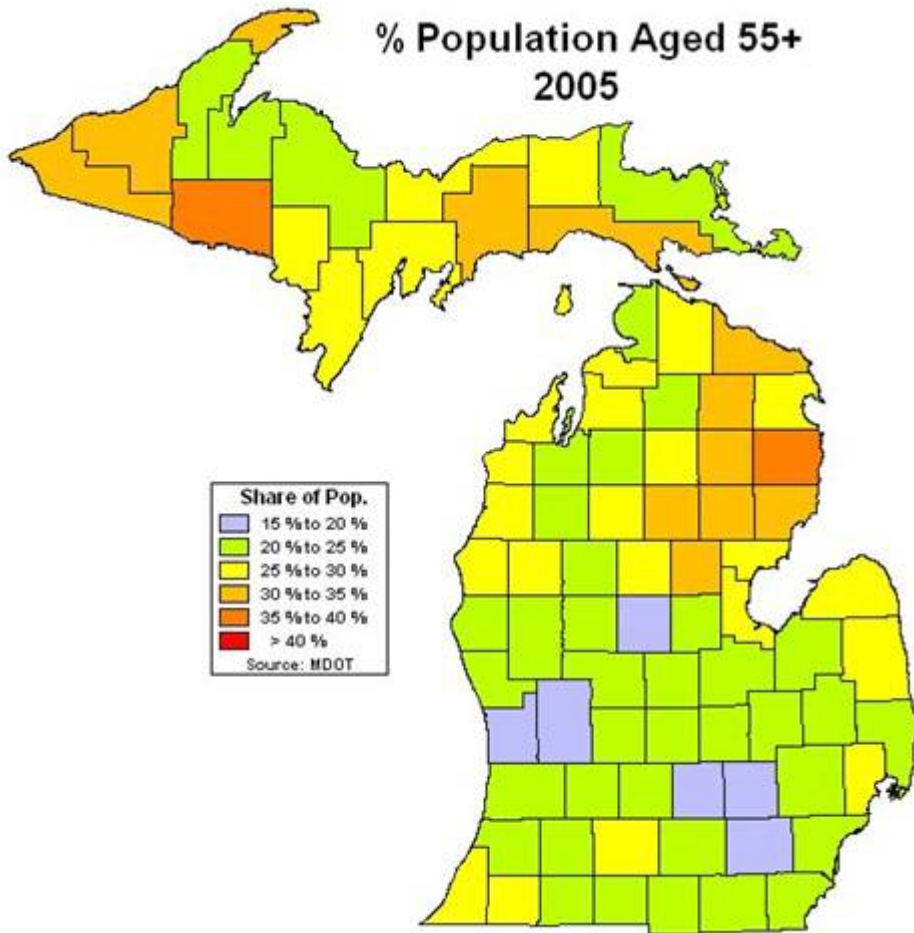
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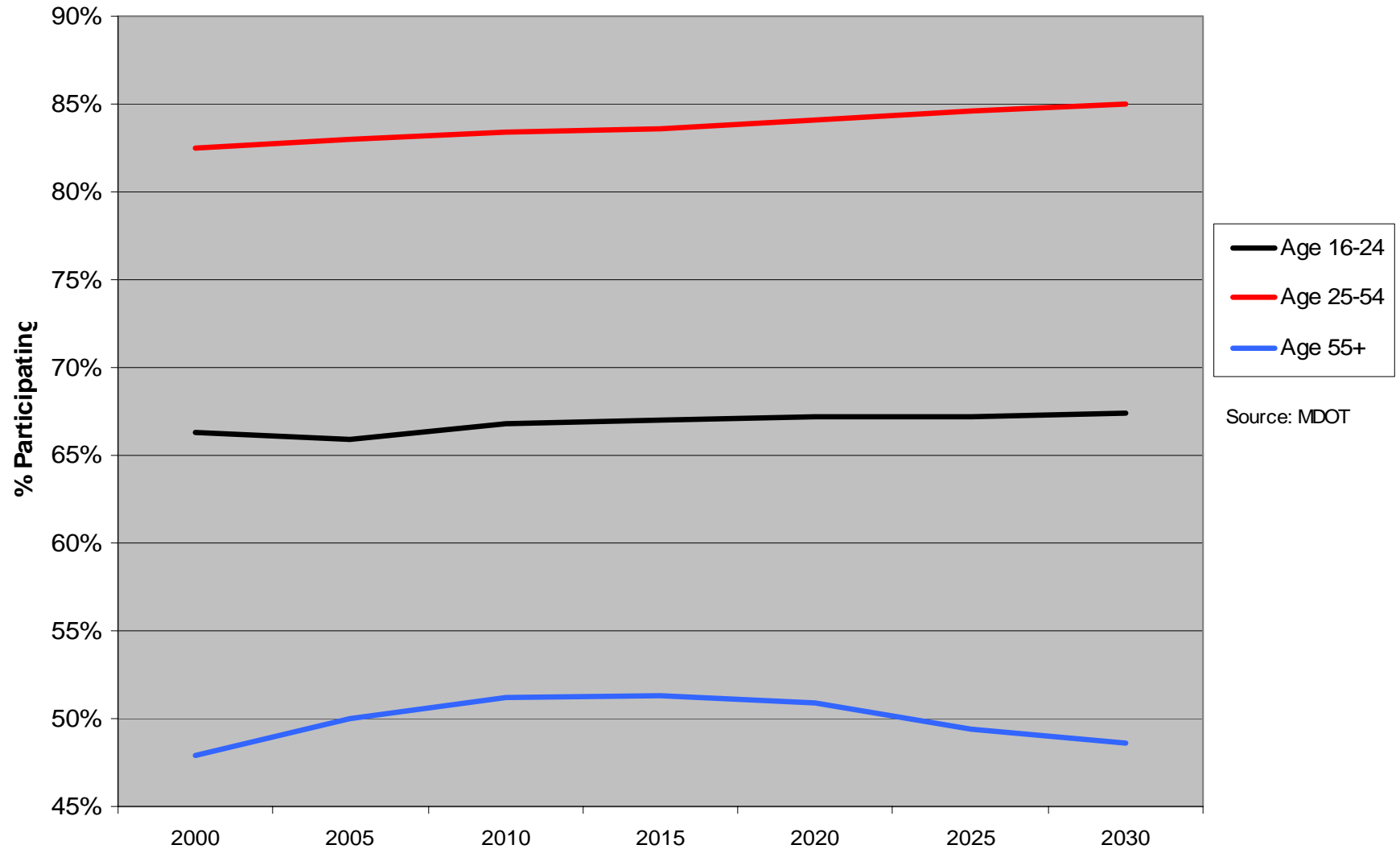
PADE

VIIPP

ICYF



Labor Force Participation Rate by Age Group 2000-2030

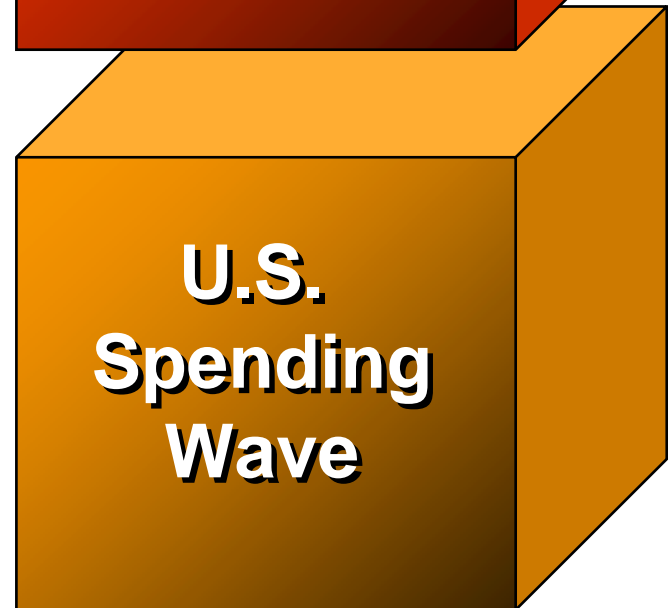
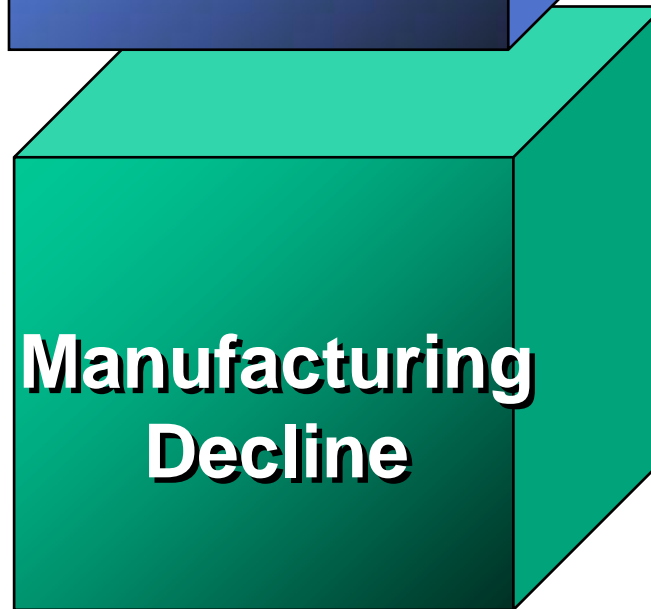
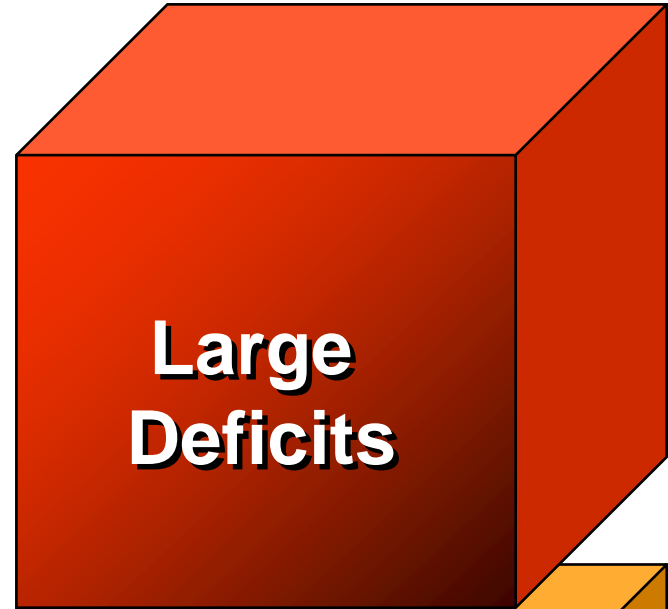
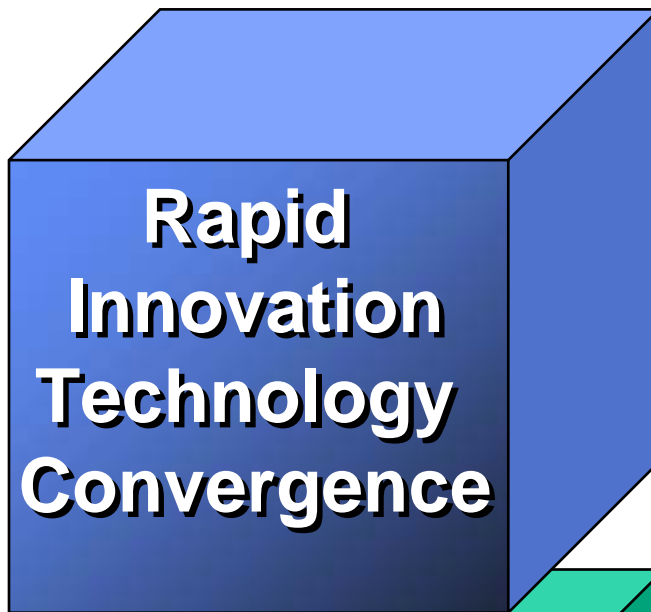


Source: MDOT



Lesson 4:
Socially and
economically
the way it is,
is not the way
it will be!

THE NEW ECONOMY



Working in 2030

20th



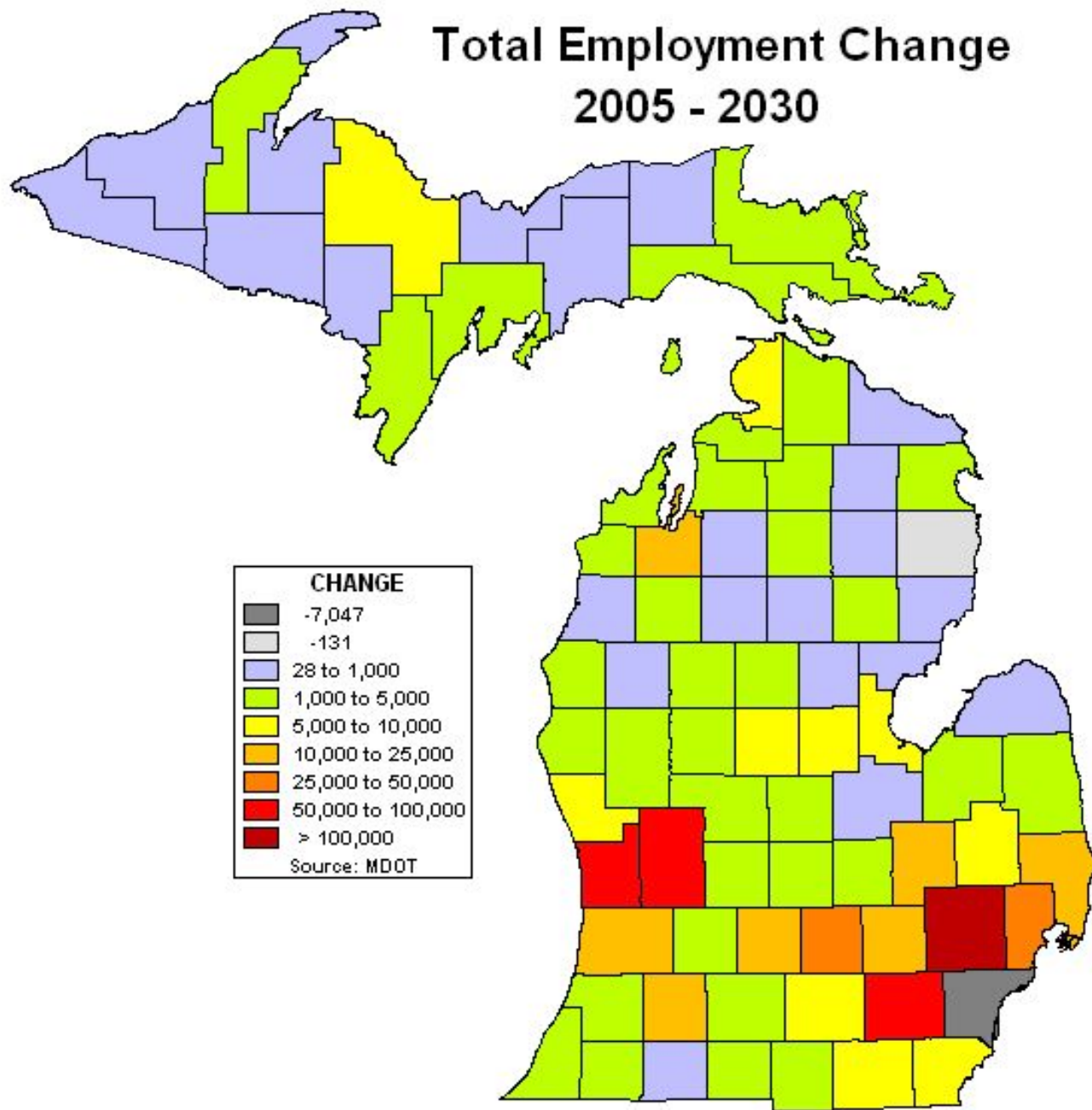
21st



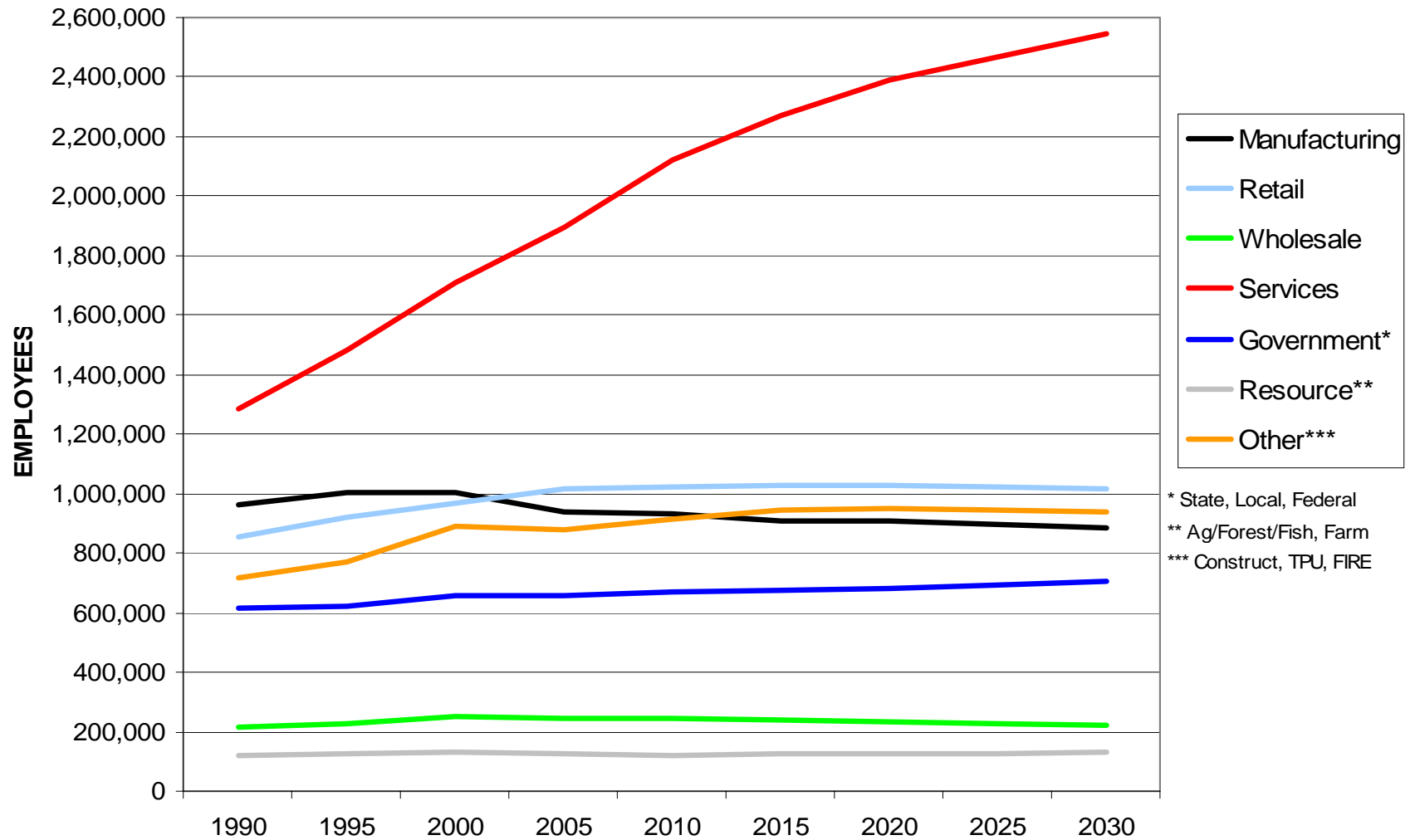
Pillars of 21st Century Life

- ◆ **STINTS** over jobs
- ◆ New kind of “**RETIREMENT**”
- ◆ The **HOME** goes back to the future
- ◆ Learning disperses, **SCHOOLS** remain
- ◆ Return to **URBAN** life

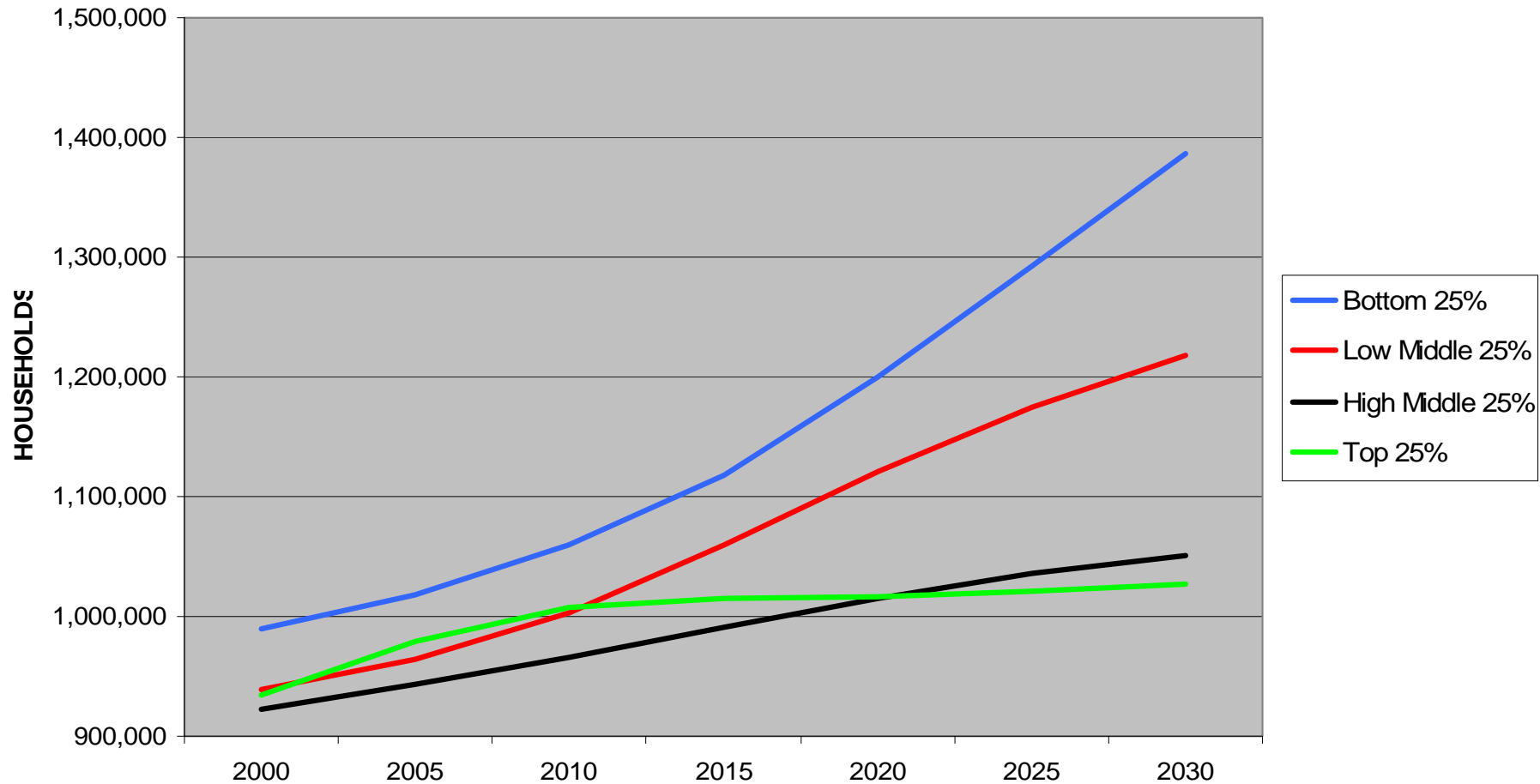
Total Employment Change 2005 - 2030



Employment by Sector 1990-2030



Households by Income 2000-2030



Environmental Imperatives

1979



2003





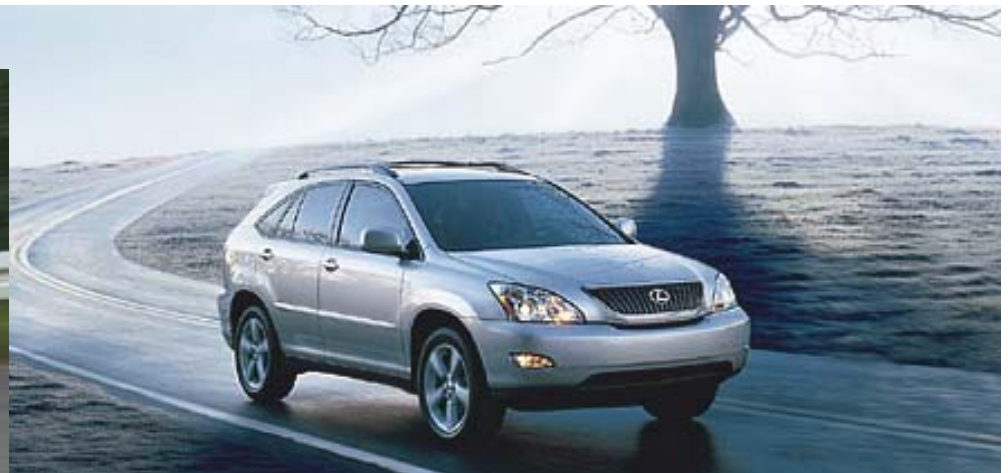
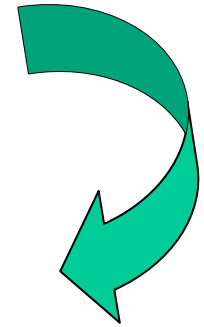
Lesson 5:
In 2030 the
personal car
is far from
dead.



Prius: ready to demo.



Prius' motor has an electrifying presence.

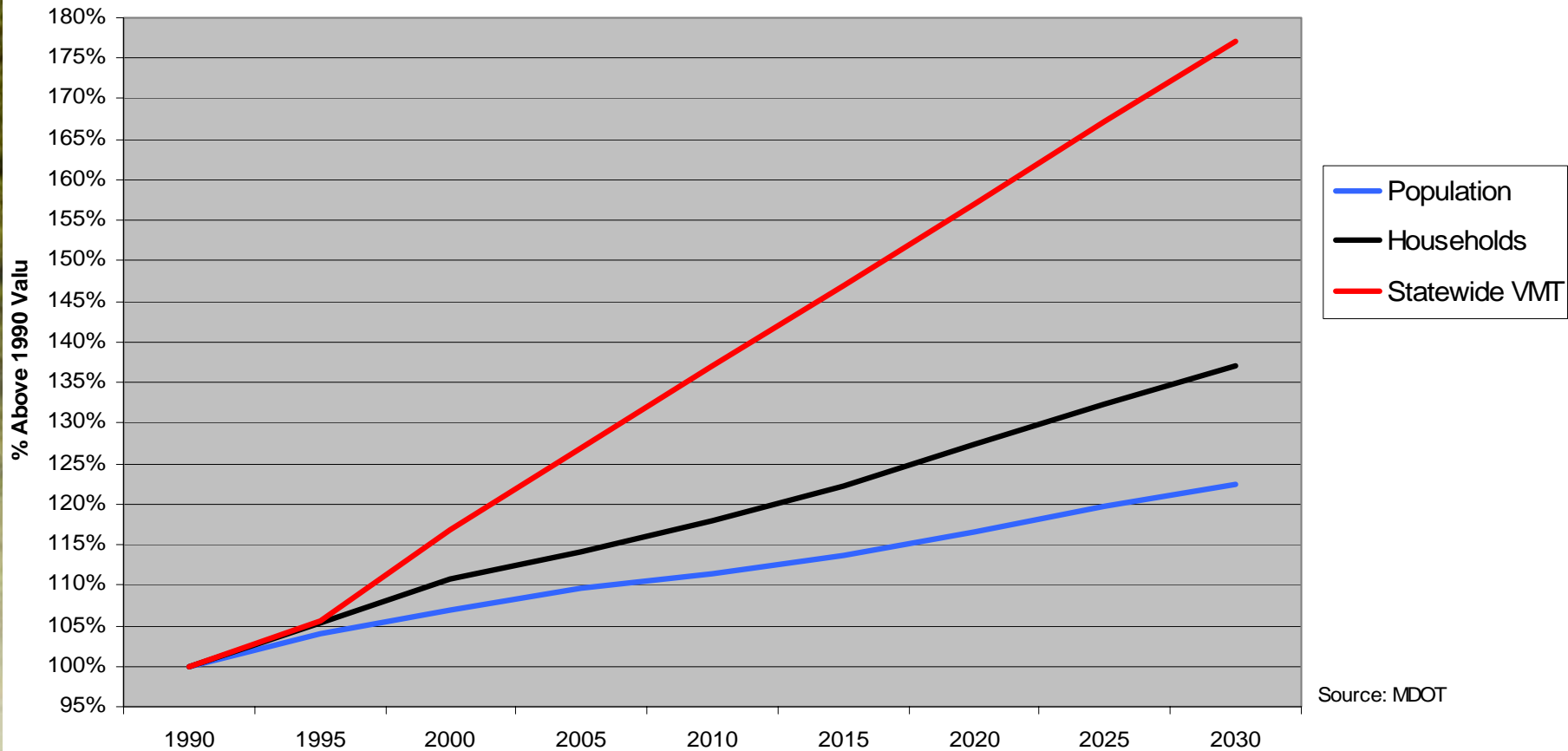


How much would you pay for a 75KW generator on Wheels?

- ◆ Cooler for beer – 1 kW
- ◆ Power tools for roadside maintenance – 2-5 kW
- ◆ Power a ski or sled tow – 5-10 kW
- ◆ Power your log cabin / trailer in Aspen – 10 kW
- ◆ Beach barby, heaters, disco, lights – 20 kW
- ◆ Power air conditioning for flower stand in Houston – 40 kW
- ◆ Melt the snow in your drive – 75 kW
- ◆ Outdoor opera or rock concert – 75 kW
- ◆ Outdoor Jacuzzi for 12 on snow slopes – 75 kW
- ◆ Power floodlights for kids baseball game – 30 kW
- ◆ Provide power requirements of 5 homes in black-out
- ◆ Back-up power for your company – 150 employees

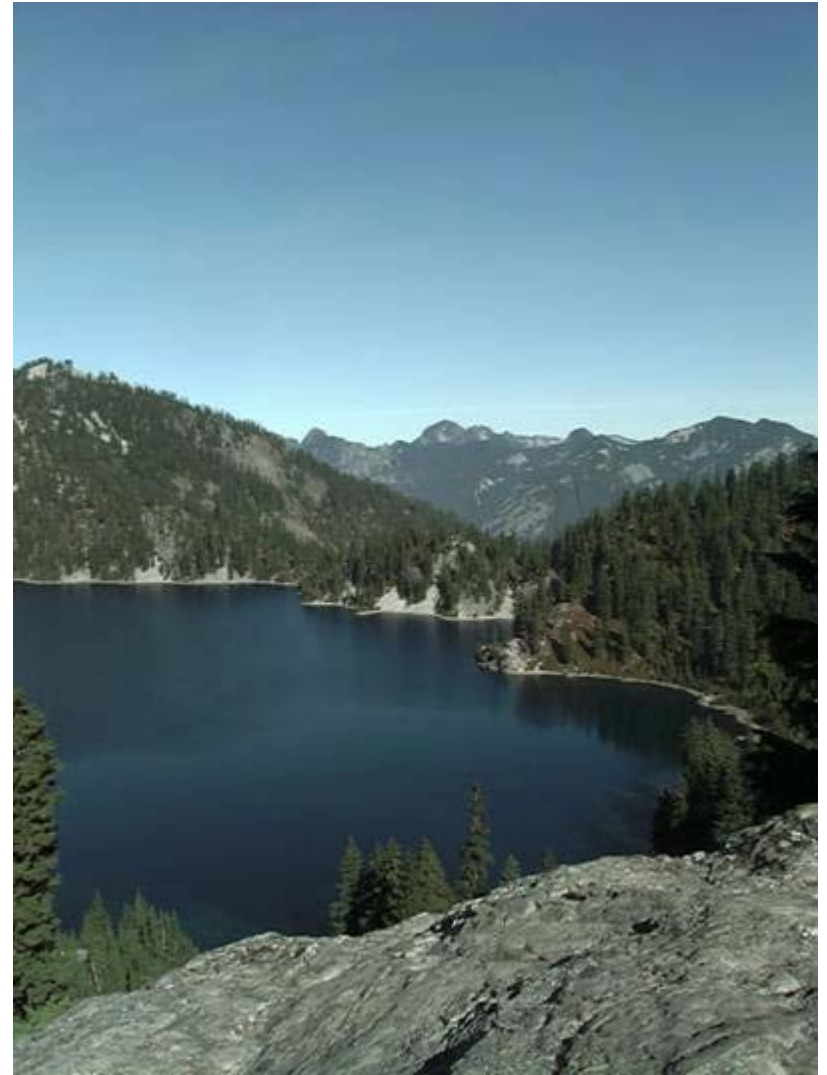


Population, Households, and Travel



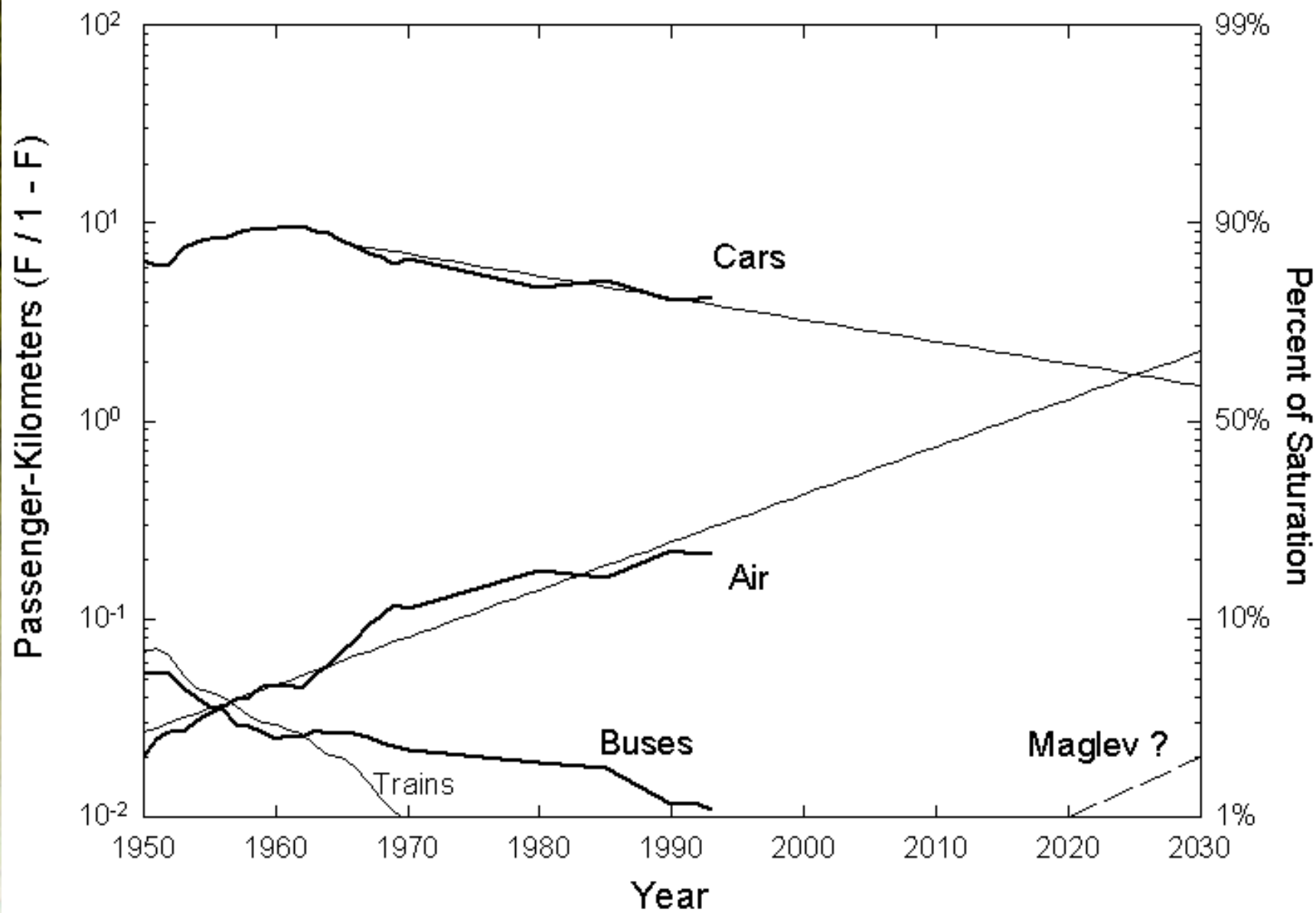
What If...

- ◆ **Air Pollution ceases to be a transportation issue**
- ◆ **Cars become cradle-to-cradle**
- ◆ **Transportation integration occurs**
- ◆ **Then impact on land use and sprawl is only big remaining issue for transportation**



What Is Your Image Of The Future?

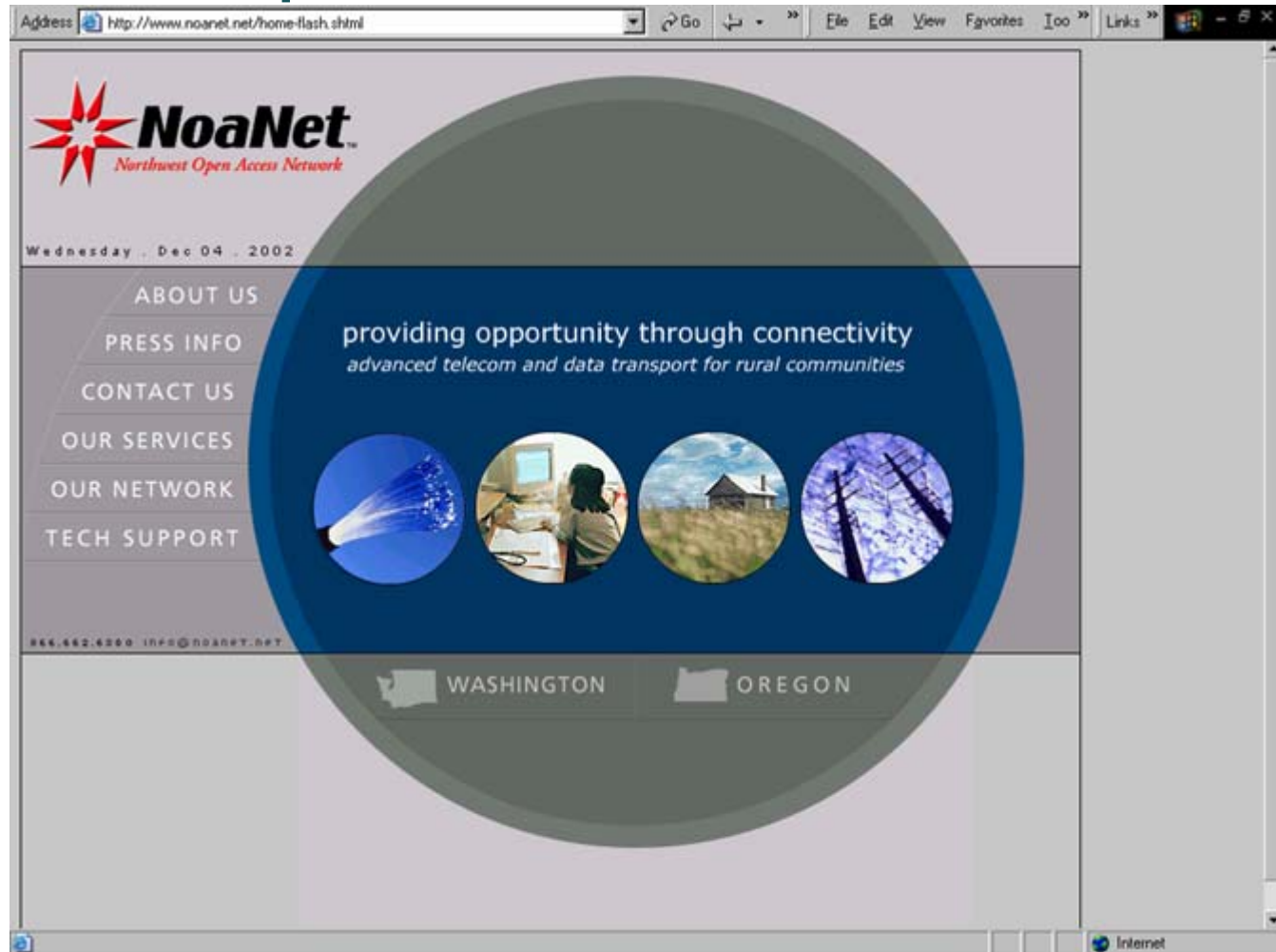




European Review, May 1998
Jesse H. Ausubel, et al.

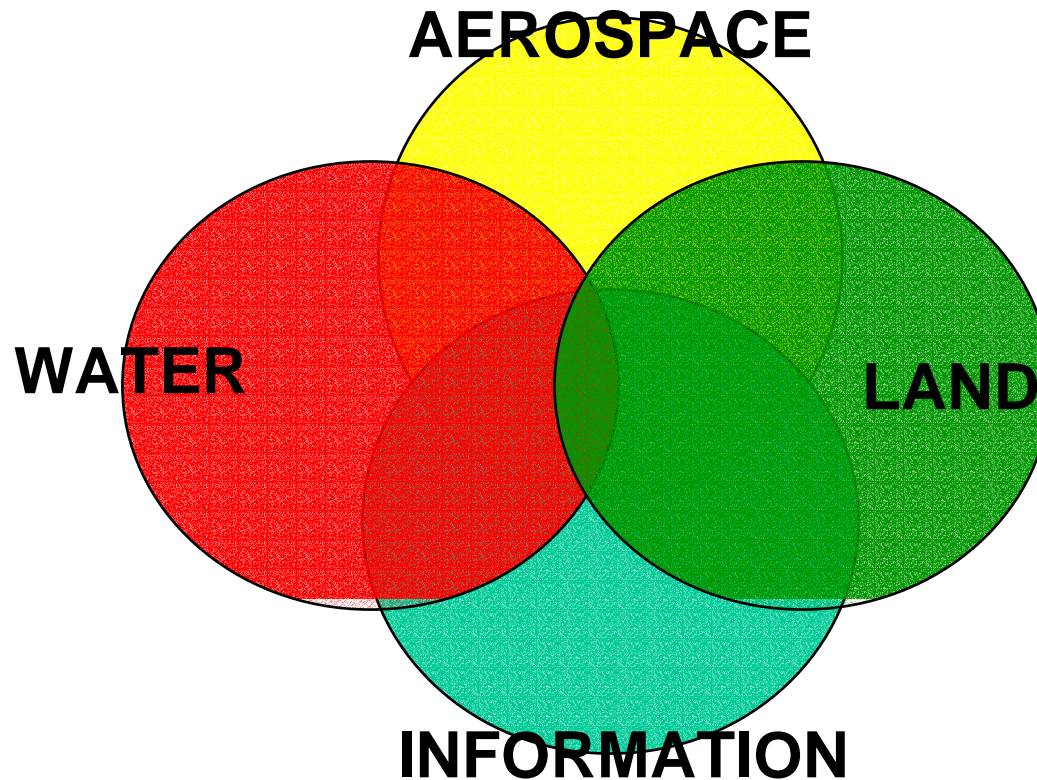


Needed: Municipal Broadband Networks



Lesson 6:

Systems will and should be integrated



Policy Breakthroughs Toward 2050

- ◆ Move bits, not mass
- ◆ Multi-mode efficiency and seamless boundaries and information
- ◆ High effectiveness, low imp infrastructure improvement
- ◆ Improve feeders and hubs
- ◆ Intelligent vehicles
- ◆ Next generation vehicles
- ◆ Rationalize system design
- ◆ Inter-institutional integration

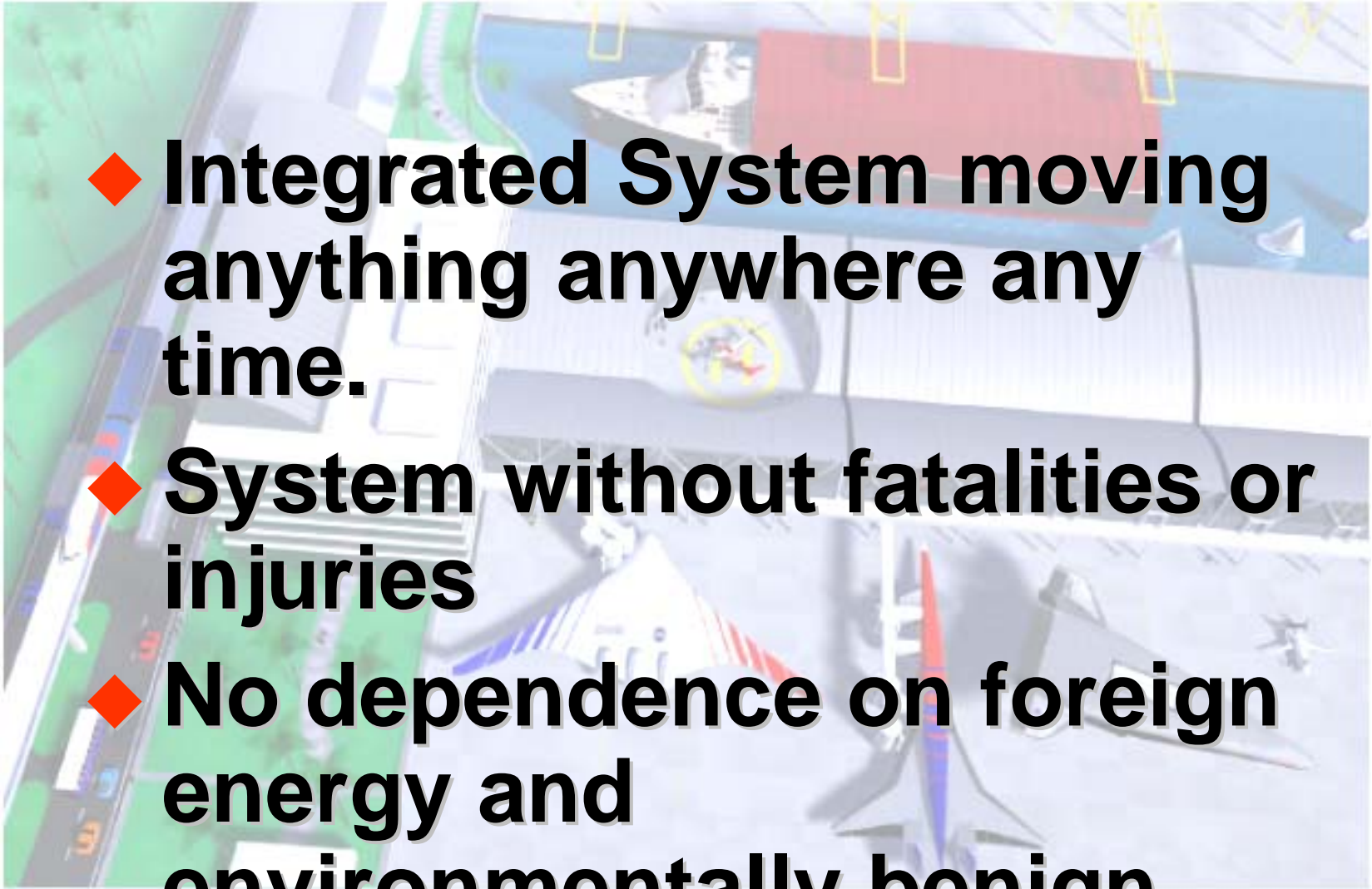
From Vision 2050



Lesson 7:

The Vision must be compelling to make a difference



- 
- ◆ **Integrated System moving anything anywhere any time.**
 - ◆ **System without fatalities or injuries**
 - ◆ **No dependence on foreign energy and environmentally benign**

**VISION 2050:
AN INTEGRATED NATIONAL TRANSPORTATION SYSTEM**

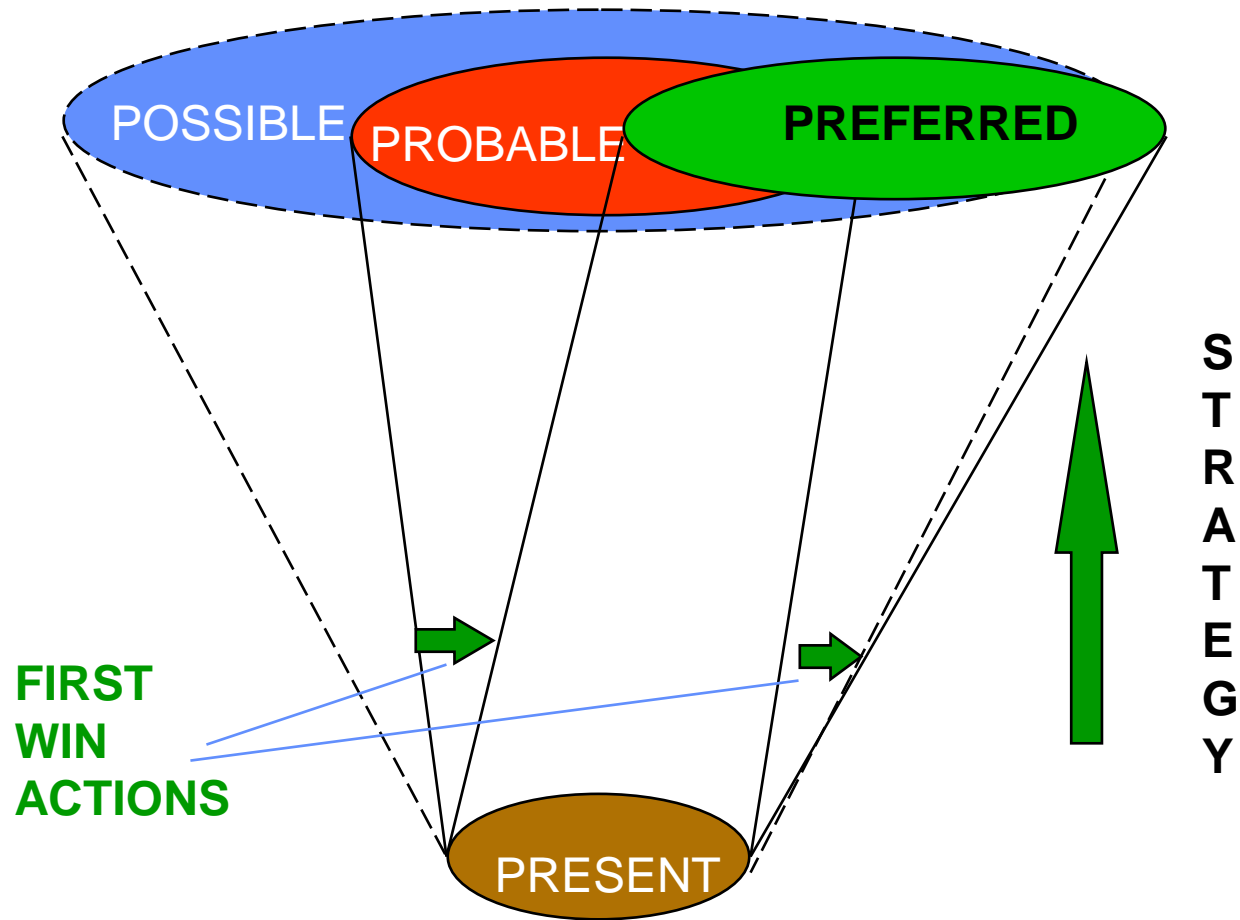
A dramatic landscape photograph featuring a range of dark, silhouetted mountains under a cloudy sky. A bright, glowing light source, possibly the sun or moon, is positioned on the right side, creating a strong lens flare and illuminating the clouds. The overall mood is contemplative and inspiring.

Lesson 8:

Strategic plans often aim just to
create a more efficient past

Instead, aim for a preferred future
plan that creates a truly new
future.

The Map for Preferred Futuring



Lesson 9:

The future
is not
something
that just
happens
to you.

The future is
something
you do.

Glen Hiemstra
Futurist.com

Summary: Lessons from the Future

1. The future creates the present.
2. Great technology revolutions continue.
3. People you see in 2030 will be different.
4. The way it is, is not the way it will be.
5. Personal car not dead.
6. Systems should be integrated.
7. Vision must be compelling
8. Plan for a new future, not a more efficient past
9. The future is something you do.

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PORTAL TO THE [future]

Images of the Future

"The rise and fall of images of the future precedes or accompanies the rise and fall of cultures. As long as a society's image is positive and flourishing, the flower of culture is in full bloom. Once the image begins to decay and lose its vitality, however, the culture does not long survive." (*Fred Polak, The Image of the Future, 1953, 1973*)

"...creative faith in the future may gradually but completely be superseded by an impotent fear of the future, leaving man an easy prey for a coming onslaught of apocalyptic catastrophe." (*Fred Polak, Responsibility for the Future, 1973*)



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Glen Hiemstra - Bio
Founder, Futurist.com

Futurist.com is not affiliated directly with the World Future Society and its magazine, *The Futurist* (we are professional members). To access the Society, go to www.wfs.org

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My long-standing email address, ghiemstra@futurist.com has been temporarily disconnected.

You can contact me at my alternate address by selecting this link: [Email Glen](#)

Thank you for your patience!



[Sample Keynote Video](#)

Glen to keynote [Club of Amsterdam Summit for the Future 2005](#)

[World Ocean Forum a Success!](#)

Future News Flash

Hyperion Pays Employees who Purchase Clean Cars

Recently it was revealed that Hyperion, a California company recognized as global leader in business performance management software, has instituted a pioneering program to encourage employees to "drive clean." Hyperion is offering a cash payment of \$5000 to each employee who purchases a new automobile that gets 45 miles to the gallon. Such a ...

....[Continue to News Flash](#)



Sunset on Mars, from Spirit Rover (JPL-NASA-Cornell, 2/26/2004)
Click on Image to link to QuickTimeMovie

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Scenario planning, futuring retreats, seminars, think tanks, and more.



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Implications Discussion

- ◆ **Objective:** Discuss how the information we just heard will influence how we do strategic planning for the department.
- ◆ **Process:**
 - 5 min: Convene in discussion groups, assign time keeper, recorder, spokesperson.
 - 20 min: Discuss these questions, recording key ideas on chart paper.
 - How will these influences affect development of the Department 5-year program?
 - How will these influences affect development of the Department long-term 20-year program?
 - Report a couple of highlights to everyone.